

CURRICULUM VITAE

Zongli Xu M.D. PH.D.

Work Address

Epidemiology Branch
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Current Position

Posdoctoral Research Fellow	National Institute of Environmental Health Science (NIH/NIEHS) Epidemiology Branch
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Education

Ph.D. Epidemiology & Medical Statistics
Sun Yat-Sen University, Guangzhou, China, June 2002
Dissertation: The Study on Methodology of Linkage analysis in Gene
Mapping Data on Complex Traits
Thesis Advisor: Dr. JiQian Fang

B.S. Epidemiology & Medical Statistics
Xinjiang Medical University, China, June 1999
Dissertation: Type II error of Chi-square test
Thesis Advisor: Qing Xu

M.D. Preventive Medicine
Xinjiang Medical University, China, June 1996

Training

Posdoctoral Research Associate	Computational Biology (Jan. 2003- Sep 2004) Department of Biology University of North Carolina at Chapel Hill
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Research Area of Specialty

Genetic Epidemiology, genetic statistics, gene mapping methodology, Haplotype analysis.

Professional Experience

September 2004 – Present: *Postdoctoral Research Fellow*
National Institute of Environmental Health Science
(NIEHS/NIH)
Epidemiology Branch

Conducts research on Molecular and Genetic Epidemiology of DNA Repair Gene SNPs Haplotypes; high resolution genetic map construction.

January 2002 - September 2004: *Postdoctoral Research Associate*
Computational Biology
Department of Biology
University of North Carolina at Chapel Hill

Conducted research on the high resolution QTL mapping in genotypically selected samples; inferring the presence and position of an unobserved marker by comparative mapping and phylogenetic analysis; the Genetic Architecture analysis of crop Domestication by Meta-analysis; permutation test in QTL mapping data on RI lines.

September 1999 – June 2002: *Research Assistant*
Department of Biostatistics and Epidemiology
Sun Yat-Sen University

Conducted research on the methodology study of linkage analysis on complex and multi-traits; Bayesian linkage analysis on complex traits; Meta analysis in linkage analysis; Genetic Epidemiological Study for Nasopharyngeal Carcinoma(NPC); data analysis in the project “the study of therapy to coronary heart disease by external counterpulsation”

Expertise:

Statistics and Statistical Genetics

- Proficient in Biostatistics, especially in Bayesian Statistics, MCMC, Computer Simulation, Meta analysis, survival analysis, missing data, Stochastic Process and GLM.
- Proficient in statistical genetics, especially in Bayesian mapping methods, QTL mapping methods, association and segregation analysis.
- Excellent problem solving and analysis skills, rich experience in biomedical research.
- Proficient in major statistical and mathematical software packages (SAS, MATLAB MAPLE, SPSS, WinBUGS).
- Expert in the use of lots of software in statistical genetics. Such as GENEHUNTER, QTL Cartographer, SAGE, LINKAGE, SIB-PAIR and ASPEX.

Bioinformatics

- Proficient in comparative mapping, phlogenetics and multiple sequence alignment.
- Proficient in many Machine Learning algorithms and their applications in bioinformatics model, such as MCMC methods, EM/GEM algorithm.
- Skilled in the uses of many genome databases on the internet.

Computer

- Proficient in C++, Bioperl, Fortran language and Foxpro programming.
- Sound knowledge of data structure and computer algorithm.
- Skilled in the Linux and UNIX operating systems.
- Good at web page making and image processing.
- Skilled in the maintenance of computer hardware.

Molecular Biology/Molecular Genetics

- Sound knowledge of Molecular Biology and Molecular Genetics.
- Familiar with many molecular biology techniques, such as microarray, PCR, genotyping, constructing plasmid vector, cell culture and protein electrophoresis.

Others

- Well trained with full range of knowledge on basic and clinical research and related experimental techniques.
- Sound knowledge of public health, such as epidemiology, nutriology and food hygiene, hygiene toxicology, vocational and labor hygiene and environmental hygiene.

Teaching Experience:

Fall 2001-Summer 2002: *Teaching Assistant*
 Department of Biostatistics
 Sun Yat-Sen University
 Course: “SAS Application in Medical Statistics”

*Teach laboratory sessions, lead discussion sessions,
 answer questions, grade lab reports and examinations.*

Fall 2000-Summer 2001: *Teacher*

Department of Biostatistics
Sun Yat-Sen University
Course: “Medical Statistics”

Lecture, answer questions and grade Examinations.

Fall 1998-Summer 1999: *Teacher*
Department of Biostatistics
Sun Yat-Sen University
Course: “Medical Statistics”

Lecture, answer questions and grade Examinations.

Fall 1997-Summer 1998: *Teacher*
Department of Biostatistics
Sun Yat-Sen University
Course: “Health Statistics”

Lecture, answer questions and grade Examinations.

Honors and Award:

1. *Roche`s Fellowship Award*, Sun Yat-Sen University, GuangZhou, China, 10/2001
2. *Excellent Graduate Award*, Sun Yat-Sen University, GuangZhou, China, 5/2002

Journal Publications:

1. **Zongli Xu**, Fei Zou, Todd. J.Vision, “High resolution QTL mapping in genotypically selected samples from experimental crosses.” *Genetics*, in press. 2004
2. **Zongli Xu**, Todd.J.Vision, “Inferring the presence and position of an unobserved marker by comparative mapping and phylogenetic analysis.” submitted. 2004
3. Maria Chacon, **Zongli Xu**, Todd.J.Vision, “The Genetic Architecture of crop Domestication: a Meta-analysis,” in review. 2004
4. Weihua Jia, **Zongli Xu**, Bingjian Feng, Lixi Huang, Xingjuan Yu, Qisheng Feng, Feng Zhang, Yixin Zeng, “Epidemiological Study of Nasopharyngeal Carcinoma Risk in Relatives of High-risk Families in Guangdong.” *Chinese Journal of Cancer*. 2004;23(7):767-770
5. WeiHua Jia, Bingjian Feng, **Zongli Xu**, Xiaoshi Zhang, Ping Huang, Lixi Huang, Xingjuan Yu, Qisheng Feng, Minghong Yao, Yinyao Shugart, Yixin Zeng, “Familial risk and clustering of nasopharyngeal carcinoma in Guangdong, China” *Cancer*. 2004:

101(2):363-369

6. **Zong-Li Xu**, Yu-Jing Fang, Ji-Qian Fang, “A model for Sibpair linkage analysis on multi-response traits and its application to gene mapping of essential hypertension.” *Journal of Biomathematics*. 2003; 18(2):176-181
7. **Zong-Li Xu**, Fang Jiqian, “A method of Bayesian linkage analysis on complex binary traits in general Pedigrees” *Journal of Biomathematics*. 2003; 18(1):15-20
8. **Zong-Li Xu**, Ji-Qian Fang, “The statistical methods to synthesize linkage studies”, *Chinese Journal of preventive medicine*, 2002; 36(3):196-198.
9. Junshu Wu, Bin Yang, Zheng Wang, Guofu Huang, **Zongli Xu**, “The effects of Tear Naturals II and Celluvisc on tear film after LASIK”, *Chinese Journal of Practical Ophthalmology*, 2002; 20(3): 186-190.
10. Bin Yang, Zheng Wang, Junshu Wu, Guofu Huang, **Zongli Xu**, “The early changes of tear film after laser in situ keratomileusis”, *Chinese Journal of Ophthalmology*, 2002; 38(2): 76-80.
11. **Zong-Li Xu**, Ji-Qian Fang, “Meta analysis for Linkage studies.” *Life Science Research*, 2001; 5(4): 308-313
12. Hua Yao, **Zong-Li Xu**, Qing Xu, “A discussion on data analysis methods for lysozyme measurement in saliva”. *Journal of Xingjiang Medical University*.1999; 22(1): 68

Book Chapters:

1. Xuyu Zhuo, Ji-Qian Fang, Chuanhua Yu, **Zongli Xu** and Ying Lu “Meta-Analysis” *Advanced Medical Statistics*, World Scientific, 2003
2. **Zong-Li Xu**, Li Li, Ji-Qian Fang, “Statistical Analysis Methods for Genetics Data”. *Medical Statistics and Computer experiment*. Second edition. ShangHai Science and technology publishing house, 2001. (This is a **textbook** for graduate student recommended by the office in charge of graduate affairs in Chinese Education Ministry).
3. Zhao-Hai Li, Yu-Ming Xie, **Zong-Li Xu**, “Statistics in genetics”. *Advanced Medical Statistics*, People`s Medical publishing house, 2001
4. George Y.H. Chi, Kun Jin, Gang Chen, Lu Cui, **Zong-Li Xu**, “Some Statistical Issues of Relevance to Confirmatory Trials”. *Advanced Medical Statistics*, People`s Medical publishing house, 2001
5. Xu-Yu Zhou, **Zong-Li Xu**, Chuan-Hua Yu, “Meta analysis method”. *Advanced Medical Statistics*, People`s Medical publishing house, 2001

6. Ming Tan, **Zong-Li Xu**, “Describing Data, Variability and Over-Dispersion in Medical Research”. *Advanced Medical Statistics*, People’s Medical publishing house, 2001

Conference Presentations:

ENAR. Mar 28-31, 2004 Pittsburgh. Title: “High resolution QTL mapping in genotypically selected samples from experimental crosses.”

ASPB 2003: Mechanisms of Genetic Variation, October 22-26, 2003, Snowbird, Utah. Title “The Genetic Architecture of crop Domestication: a Meta-analysis.”

International Symposium on Mapping and Identification of Genes underlying complex diseases and traits. May 24-26, 2001 Changsha, China. Title “Meta analysis for linkage studies”.

International Symposium on Mapping and Identification of Genes underlying complex diseases and traits. May 24-26, 2001. Changsha, China. Title “Linkage analysis of the uncoupling protein 1 gene in Hong Kong Chinese with hypertensive family history”.

Research Grants Awards:

“The Study on Methodology of Linkage Analysis in Gene Mapping Data on Complex Traits”, the National Science Foundation of China, the grant number is 30170523. (co-PI), 2001-2005.

“A Genetic Epidemiological Study for Nasopharyngeal Carcinoma(NPC), Guang Dong Province”, the National Science Foundation of China, the grant number is 30000141. (co-investigator), 2000-2004.

Membership in Professional Associations:

1. Member of the International Biometric Society (IBS)